

REMARKS

Claim 3 of the application has been amended (along with claim 14) to cancel the term "flowable" and thereby obviate the rejection of the claims under 35 U.S.C. Section 112. While there is clear support in the application for the term "flowable" (e.g. page 4, line 11), Applicants have canceled this term to narrow the issues in this case and because the term "flowable" is an inherent feature of the claimed "slurry".

In addition, in a telephone conference with the undersigned, the Patent Examiner questioned whether the term "loose bulk" density was properly applied in claim 3 because "loose bulk" generally refers to dry powders. It is clear from the specification and the claims (e.g. claim 3) that the slurry (combination of bicarbonate particles and liquid medium) is required to have a density of about 1.40 to about 1.60 grams per mL (see page 3, lines 10-12 of the specification). One of ordinary skill in the art would recognize that the unit grams per mL as applied to the "slurry" means that the units mL (milliliter) is a unit of volume because the slurry contains a liquid medium. Therefore, if one of ordinary skill in the art recognized that the term "loose bulk" was properly applied to dry powders, then the same skilled artisan would recognize that the units of 1.40 to 1.60 grams per mL referred to the density of the slurry. Thus, the change to claim 3 does not raise a new matter issue and corrects a questionable term to one that the skilled artisan would recognize is a proper term.

The present invention is therefore directed to a slurry which includes substantially spherical alkali metal bicarbonate particles in a certain amount by weight, a certain medium particle size distribution and a certain surface area. Of particular importance to the present claims is that the slurry has a density of about 1.40 to about 1.60 grams per mL. It is this density that defines the flowable properties of the slurry and distinguishes the slurry from the toothpaste composition described in the prior art Winston et al. reference (U.S. Patent No.: 4,623,536).

In maintaining the rejection of the claims under 35 U.S.C. Section 103(a) the Patent Examiner requested further limitations that defined the instantly claimed compositions in terms of a more precise recitation of components. In a previous telephone interview with the Patent Examiner, it was pointed out that the density of the slurry as recited in claim 3 (about 1.40 to about 1.60 grams per mL) distinguished the claimed invention over Winston.

Winston discloses a sodium bicarbonate containing toothpaste which is employed as the sole abrasive agent. The problem addressed in Winston is that high levels of conventional bicarbonate abrasives in toothpaste formulations impart excessively high viscosities, and prevent mixing during manufacturing (column 2, lines 11-13). The solution to the problem is to provide a toothpaste formulation containing sodium bicarbonate as the sole abrasive material in an amount of at least 60% by weight with at least about 30% by weight of the sodium bicarbonate having a particle size less than 25 microns (column 3, lines 3-8).

The toothpaste formulation in addition to sodium bicarbonate also includes at least a humectant and a thickener (column 3, lines 63 through column 4, line 11). Particularly preferred components of the reference toothpaste composition is shown in the Table at the bottom of column 5. Nowhere in the reference is there mention of the density of the toothpaste composition. However, it can be observed from Examples 1-3 beginning in column 6 and particularly in the description commencing at column 6, line 47 that a certain pressure was required in order to dispense the reference toothpaste composition through an orifice of the type associated with a tube of toothpaste. One of the key features of the reference invention is that the dispensing pressure is reduced then when conventional larger bicarbonate particles are used (see Table 1 in column 7 and the description at column 7, beginning at line 25). Of particular importance to the issues herein is the fact that the toothpaste composition of the reference requires a dispensing pressure in order to move the composition out of the toothpaste dispenser.

One of ordinary skill in the art would therefore recognize that the reference formulation is not a slurry. A slurry is inherently flowable and would be expected to flow out of an orifice.

Applicants have previously provided intrinsic and extrinsic evidence regarding the definition of "slurry" and that flowability is an inherent characteristic. One of ordinary skill in the art would have no difficulty in understanding that a toothpaste

formulation of the type described in the Winston reference requires a dispensing pressure in order to move out of an orifice. A slurry which is inherently flowable does not require a dispensing pressure and therefore the density set forth in the present claims excludes compositions of the type disclosed in Winston. It necessarily follows that the density set forth in claim 3 and thereby incorporated into all of the claims pending in the application is within a range lower than the density of any toothpaste formulation described or suggested in Winston.

It would be further observed from the reference that the bicarbonate-containing toothpaste composition as disclosed in the tables appearing in columns 5 and 6 may or may not contain water. The largest amount of water is only about 18%. It will be observed from claim 3 that the amount of the liquid medium based on the high and low amount of the bicarbonate particles will typically exceed 20% and as shown in the Example appearing on page 10 of the application, the water charge is exemplified as 30%. This is further evidence that the density of the slurry (about 1.40 to about 1.60 grams per mL) is significantly lower than the density that can be contributed to the toothpaste formulations of the reference.


It is therefore submitted that the claims as amended fully define an invention that is not taught nor suggested by the reference of record. Winston is concerned with toothpaste formulations and particularly how to increase the bicarbonate content as the sole abrasive agent. There is no teaching or suggestion of decreasing the density of the toothpaste formulation to obtain a slurry or any purpose for such a

slurry. Quite to the contrary, the toothpaste formulation that is packed into a toothpaste tube cannot be in the form of a slurry which could easily escape from the tube. Furthermore, a toothpaste composition typically remains on the toothbrush employed by the user until brushing commences. A slurry because it is inherently flowable would not be used for this purpose.

It is therefore submitted that the present application is in condition for allowance and early passage to issue is therefore deemed proper and is respectfully requested.

It is believed that no fee is due in connection with this matter. However, if any fee is due, it should be charged to Deposit Account No. 23-0510.

Respectfully submitted,

  
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